PCT10

#10

ENTERED

```
 3 <110> APPLICANT: Becker, Gerald
 4       Hale, John
 5       Heath, William
 6       Johnstone, Edward
 7       Little, Sheila
 8       Tu, Yuan
 9       Yeh, Wu-Kuang
10       Yin, Tinggui
12 <120> TITLE OF INVENTION: Amyloid Precursor Protein Protease and Related Nucleic Acid
Compounds
14 <130> FILE REFERENCE: X-11600
C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/018,383A
C--> 16 <141> CURRENT FILING DATE: 2002-07-08
16 <160> NUMBER OF SEQ ID NOS: 5
18 <170> SOFTWARE: PatentIn version 3.1
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 1683
22 <212> TYPE: DNA
23 <213> ORGANISM: Homo sapiens
25 <220> FEATURE:
26 <221> NAME/KEY: misc_feature
27 <222> LOCATION: (25)..(1629)
28 <223> OTHER INFORMATION: CDS
31 <220> FEATURE:
32 <221> NAME/KEY: misc_feature
33 <222> LOCATION: (1285)..(1365)
34 <223> OTHER INFORMATION: n = any nucleotide A, C, G, or T
37 <400> SEQUENCE: 1
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40 catgtgggtg cagccctggg agcactgtgg ttctgcctca caggagccct ggaggtccag    120
42 gtccctgaag acccagtggt ggcactggtg ggcaccgatg ccaccctgtg ctgctccttc    180
44 tcccctgagc ctggcttcag cctggcacag ctcaacctca tctggcagct gacagatacc    240
46 aaacagctgg tgcacagctt tgctgagggc caggaccagg gcagcgccta tgccaaccgc    300
48 acggccctct tcccggacct gctggcacag ggcaacgcat ccctgaggct gcagcgcgtg    360
50 cgtgtggcgg acgagggcag cttcacctgc ttcgtgagca tccgggattt cggcagcgct    420
52 gccgtcagcc tgcaggtggc cgctccctac tcgaagccca gcatgaccct ggagcccaac    480
54 aaggacctgc ggccagggga cacggtgacc atcacgtgct ccagctacca gggctaccct    540
56 gaggctgagg tgttctggca ggatgggcag ggtgtgcccc tgactggcaa cgtgaccacg    600
58 tcgcagatgg ccaacgagca gggcttgttt gatgtgcaca gcatcctgcg ggtggtgctg    660
60 ggtgcaaatg gcacctacag ctgcctggtg cgcaaccccg tgctgcagca ggatgcgcac    720
62 agctctgtca ccatcacacc ccagagaagc cccacaggag ccgtggaggt ccaggtccct    780
64 gaggacccgg tggtggccct agtgggcacc gatgccaccc tgcgctgctc cttctcccc     840
66 gagcctggct tcagcctggc acagctcaac ctcatctggc agctgacaga caccaaacag    900
68 ctggtgcaca gtttcaccga aggccgggac cagggcagcg cctatgccaa ccgcacggcc    960
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RAW SEQUENCE LISTING   DATE: 08/06/2002
PATENT APPLICATION: US/10/018,383A   TIME: 16:33:38

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Output Set: N:\CRF3\08062002\J018383A.raw

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      74 agcctgcagg tggccgctcc ctactcgaag cccagcatga ccctggagcc caacaaggac    1140
      76 ctgcggccag gggacacggt gaccatcacg tgctccagct accggggcta ccctgaggct    1200
      78 gaggtgttct ggcaggatgg gcagggtgtg cccctgactg gcaacgtgac cacgtcgcag    1260
W--> 80 atggccaacg agcagggctt gttttnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn    1320
W--> 82 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnngatgc gcacggctct    1380
      84 gtcaccatca cagggcagcc tatgacattc cccccagagg ccctgtgggt gaccgtgggg    1440
      86 ctgtctgtct gtctcattgc actgctggtg gccctggctt cgtgtgctg gagaaagatc    1500
      88 aaacagagct gtgaggagga gaatgcagga gctgaggacc aggatgggga gggagaaggc    1560
      90 tccaagacag ccctgcagcc tctgaaacac tctgacagca agaagatga tggacaagaa    1620
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      94 tgc                                                                   1683
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     103 <221> NAME/KEY: MISC_FEATURE
     104 <222> LOCATION: (421)..(447)
     105 <223> OTHER INFORMATION: Xaa at locations 421 through 447 stand for Ala, Cys, Asp,
Glu, Ph
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     107   l, Trp, or Tyr
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     116 Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu Val Gln
     117   20   25   30
     120 Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu
     121   35   40   45
     124 Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn
     125   50   55   60
     128 Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala
     129 65   70   75   80
     132 Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe
     133   85   90   95
     136 Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
     137   100   105   110
     140 Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp
     141   115   120   125
     144 Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
     145   130   135   140
     148 Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr
     149 145   150   155   160
     152 Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val
     153   165   170   175
     156 Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr
     157   180   185   190
     160 Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Ile Leu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/018,383A
DATE: 08/06/2002
TIME: 16:33:38

Input Set : A:\X11600.ST25.txt
Output Set: N:\CRF3\08062002\J018383A.raw

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164 Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn
165     210             215                 220
168 Pro Val Leu Gln Gln Asp Ala His Ser Ser Val Thr Ile Thr Pro Gln
169 225             230                 235                 240
172 Arg Ser Pro Thr Gly Ala Val Glu Val Gln Val Pro Glu Asp Pro Val
173             245                 250                 255
176 Val Ala Leu Val Gly Thr Asp Ala Thr Leu Arg Cys Ser Phe Ser Pro
177             260                 265                 270
180 Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr
181         275                 280                 285
184 Asp Thr Lys Gln Leu Val His Ser Phe Thr Glu Gly Arg Asp Gln Gly
185     290                 295                 300
188 Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln
189 305             310                 315                 320
192 Gly Asn Ala Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly
193             325                 330                 335
196 Ser Phe Thr Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val
197             340                 345                 350
200 Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu
201         355                 360                 365
204 Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser
205     370                 375                 380
208 Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln
209 385             390                 395                 400
212 Gly Val Pro Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu
213             405                 410                 415
```

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W--> 216 Gln Gly Leu Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     217         420                 425                 430
W--> 220 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp
     221         435                 440                 445
     224 Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro Met Thr Phe Pro Pro
     225     450                 455                 460
     228 Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val Cys Leu Ile Ala Leu
     229 465             470                 475                 480
     232 Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys Ile Lys Gln Ser Cys
     233             485                 490                 495
     236 Glu Glu Glu Asn Ala Gly Ala Glu Asp Gln Asp Gly Glu Gly Glu Gly
     237             500                 505                 510
     240 Ser Lys Thr Ala Leu Gln Pro Leu Lys His Ser Asp Ser Lys Glu Asp
     241     515                 520                 525
     244 Asp Gly Gln Glu Ile Ala
     245     530
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248 <210> SEQ ID NO: 3
249 <211> LENGTH: 1683
250 <212> TYPE: DNA
251 <213> ORGANISM: Homo sapiens
253 <220> FEATURE:
254 <221> NAME/KEY: CDS

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/018,383A

DATE: 08/06/2002
TIME: 16:33:38

Input Set : A:\X11600.ST25.txt
Output Set: N:\CRF3\08062002\J018383A.raw

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256 <223> OTHER INFORMATION:
259 <220> FEATURE:
260 <221> NAME/KEY: misc_feature
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262 <223> OTHER INFORMATION:
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268                                 1               5
270 atg ggt gtg cat gtg ggt gca gcc ctg gga gca ctg tgg ttc tgc ctc        99
271 Met Gly Val His Val Gly Ala Ala Leu Gly Ala Leu Trp Phe Cys Leu
272 10                  15                  20                  25
274 aca gga gcc ctg gag gtc cag gtc cct gaa gac cca gtg gtg gca ctg       147
275 Thr Gly Ala Leu Glu Val Gln Val Pro Glu Asp Pro Val Val Ala Leu
276                 30                  35                  40
278 gtg ggc acc gat gcc acc ctg tgc tgc tcc ttc tcc cct gag cct ggc       195
279 Val Gly Thr Asp Ala Thr Leu Cys Cys Ser Phe Ser Pro Glu Pro Gly
280             45                  50                  55
282 ttc agc ctg gca cag ctc aac ctc atc tgg cag ctg aca gat acc aaa       243
283 Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys
284         60                  65                  70
286 cag ctg gtg cac agc ttt gct gag ggc cag gac cag ggc agc gcc tat       291
287 Gln Leu Val His Ser Phe Ala Glu Gly Gln Asp Gln Gly Ser Ala Tyr
288     75                  80                  85
290 gcc aac cgc acg gcc ctc ttc ccg gac ctg ctg gca cag ggc aac gca       339
291 Ala Asn Arg Thr Ala Leu Phe Pro Asp Leu Leu Ala Gln Gly Asn Ala
292 90                  95                  100                 105
294 tcc ctg agg ctg cag cgc gtg cgt gtg gcg gac gag ggc agc ttc acc       387
295 Ser Leu Arg Leu Gln Arg Val Arg Val Ala Asp Glu Gly Ser Phe Thr
296             110                 115                 120
298 tgc ttc gtg agc atc cgg gat ttc ggc agc gct gcc gtc agc ctg cag       435
299 Cys Phe Val Ser Ile Arg Asp Phe Gly Ser Ala Ala Val Ser Leu Gln
300             125                 130                 135
302 gtg gcc gct ccc tac tcg aag ccc agc atg acc ctg gag ccc aac aag       483
303 Val Ala Ala Pro Tyr Ser Lys Pro Ser Met Thr Leu Glu Pro Asn Lys
304             140                 145                 150
306 gac ctg cgg cca ggg gac acg gtg acc atc acg tgc tcc agc tac cag       531
307 Asp Leu Arg Pro Gly Asp Thr Val Thr Ile Thr Cys Ser Ser Tyr Gln
308     155                 160                 165
310 ggc tac cct gag gct gag gtg ttc tgg cag gat ggg cag ggt gtg ccc       579
311 Gly Tyr Pro Glu Ala Glu Val Phe Trp Gln Asp Gly Gln Gly Val Pro
312 170                 175                 180                 185
314 ctg act ggc aac gtg acc acg tcg cag atg gcc aac gag cag ggc ttg       627
315 Leu Thr Gly Asn Val Thr Thr Ser Gln Met Ala Asn Glu Gln Gly Leu
316             190                 195                 200
318 ttt gat gtg cac agc atc ctg cgg gtg gtg ctg ggt gca aat ggc acc       675
319 Phe Asp Val His Ser Ile Leu Arg Val Val Leu Gly Ala Asn Gly Thr
320             205                 210                 215
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322 tac agc tgc ctg gtg cgc aac ccc gtg ctg cag cag gat gcg cac agc     723
323 Tyr Ser Cys Leu Val Arg Asn Pro Val Leu Gln Gln Asp Ala His Ser
324         220                 225                 230
326 tct gtc acc atc aca ccc cag aga agc ccc aca gga gcc gtg gag gtc     771
327 Ser Val Thr Ile Thr Pro Gln Arg Ser Pro Thr Gly Ala Val Glu Val
328         235                 240                 245
330 cag gtc cct gag gac ccg gtg gtg gcc cta gtg ggc acc gat gcc acc     819
331 Gln Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr
332 250                 255                 260                 265
334 ctg cgc tgc tcc ttc tcc ccc gag cct ggc ttc agc ctg gca cag ctc     867
335 Leu Arg Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu
336         270                 275                 280
338 aac ctc atc tgg cag ctg aca gac acc aaa cag ctg gtg cac agt ttc     915
339 Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe
340         285                 290                 295
342 acc gaa ggc cgg gac cag ggc agc gcc tat gcc aac cgc acg gcc ctc     963
343 Thr Glu Gly Arg Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu
344         300                 305                 310
346 ttc ccg gac ctg ctg gca caa ggc aat gca tcc ctg agg ctg cag cgc    1011
347 Phe Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg
348         315                 320                 325
350 gtg cgt gtg gcg gac gag ggc agc ttc acc tgc ttc gtg agc atc cgg    1059
351 Val Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg
352 330                 335                 340                 345
354 gat ttc ggc agc gct gcc gtc agc ctg cag gtg gcc gct ccc tac tcg    1107
355 Asp Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser
356         350                 355                 360
358 aag ccc agc atg acc ctg gag ccc aac aag gac ctg cgg cca ggg gac    1155
359 Lys Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp
360         365                 370                 375
362 acg gtg acc atc acg tgc tcc agc tac cgg ggc tac cct gag gct gag    1203
363 Thr Val Thr Ile Thr Cys Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu
364         380                 385                 390
366 gtg ttc tgg cag gat ggg cag ggt gtg ccc ctg act ggc aac gtg acc    1251
367 Val Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr
368         395                 400                 405
370 acg tcg cag atg gcc aac gag cag ggc ttg ttt gat gtg cac agc gtc    1299
371 Thr Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Val
372 410                 415                 420                 425
374 ctg cgg gtg gtg ctg ggt gcg aat ggc acc tac agc tgc ctg gtg cgc    1347
375 Leu Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg
376         430                 435                 440
378 aac ccc gtg ctg cag cag gat gcg cac ggc tct gtc acc atc aca ggg    1395
379 Asn Pro Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly
380         445                 450                 455
382 cag cct atg aca ttc ccc cca gag gcc ctg tgg gtg acc gtg ggg ctg    1443
383 Gln Pro Met Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu
384         460                 465                 470
386 tct gtc tgt ctc att gca ctg ctg gtg gcc ctg gct ttc gtg tgc tgg    1491
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 08/06/2002
PATENT APPLICATION: US/10/018,383A   TIME: 16:33:39

Input Set : A:\X11600.ST25.txt
Output Set: N:\CRF3\08062002\J018383A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:1; N Pos. 1309,1310,1311,1312,1313,1314,1315,1316,1317,1318,1319,1320
Seq#:1; N Pos. 1321,1322,1323,1324,1325,1326,1327,1328,1329,1330,1331,1332
Seq#:1; N Pos. 1333,1334,1335,1336,1337,1338,1339,1340,1341,1342,1343,1344
Seq#:1; N Pos. 1345,1346,1347,1348,1349,1350,1351,1352,1353,1354,1355,1356
Seq#:1; N Pos. 1357,1358,1359,1360,1361,1362,1363,1364,1365
Seq#:2; Xaa Pos. 421,422,423,424,425,426,427,428,429,430,431,432,433,434
Seq#:2; Xaa Pos. 435,436,437,438,439,440,441,442,443,444,445,446,447